

REMARKS

Reconsideration and allowance of the application are respectfully requested in light of the above amendments and the following remarks.

Claims 2, 5, 10, 20, 25, 34-45, 47, 49 and 51 have been cancelled without prejudice or disclaimer, and claims 1, 4, 9, 19, 24, 48 and 50 have been amended to clarify the following two patentable aspects of the claimed methods and apparatus and to correct minor grammatical mistakes. Support for the amendments to the claims is provided, for example, in paragraph [0062] of the published U.S. application. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the preferred embodiments). No new matter is added.

First, as illustrated in FIG. 1 and described in the corresponding description thereof, claims 1, 4, 9, 19 and 24 have been amended to clarify that a mobile access router forms a mobile network, a local fixed router forms a local network and resides in the mobile network formed by the mobile access router, and a mobile node participates in the local network.

Second, claims 1, 4, 9, 19 and 24 have been amended to clarify that the mobile node sends a message including information requesting a global address of the mobile access router, the message being destined for a network entity outside of the local network, such as, for example, a Binding Update message sent to the mobile node's home agent. (see, e.g., par. [0062] of the published U.S. application).

Claims 1-2, 4-5, 7, 9-13, 19-20, 22, 24-28, 35, 37-39, 41 and 43-51 were rejected under 35 U.S.C. §103(a) as being anticipated by Venkitaraman et al. (US 2003/0161287) (hereinafter, "Venkitaraman") in view of Janneteau et al. (US 7,430,174) (hereinafter, "Janneteau"). Claims

6, 21, 34 and 40 were rejected under 35 U.S.C. §103(a) as being unpatentable over Venkitaraman in view of Janneteau and Korus et al. (US 6,721,297) (hereinafter, “Korus”). Claims 8, 23, 36 and 42 were rejected under 35 U.S.C. §103(a) as being unpatentable over Venkitaraman in view of Janneteau and Watanabe et al. (US 7,020,440) (hereinafter, “Watanabe”). To the extent that these rejections may be deemed applicable to the amended claims presented herein, the Applicants respectfully traverse based on the points set forth below.

Claim 1 is directed towards a dynamic network management system and recites the features of:

“1. A dynamic network management system in a communication system including a mobile access router forming a mobile network, a local fixed router forming a local network and residing in the mobile network, and a mobile node participating in the local network,

wherein the dynamic network management system is configured so that, after the mobile node sends a message destined for a network entity outside of the local network, the message including information requesting a global address of the mobile access router, the mobile access router receiving the information from the mobile node through the local fixed router informs the mobile node about the global address of the mobile access router.” (emphasis added)

As explained in the specification, the system recited by claim 1 enables global connectivity to be provided to a mobile node and a mobile network even though a local fixed router resides in between the mobile access router forming the mobile network and the mobile node connected to this mobile network. (par. [0102] of the published U.S. application). As noted above, the system of claim 1 recites the feature: “...wherein the dynamic network management system is configured so that, after the mobile node sends a message destined for a network entity outside of the local network, the message including information requesting a global address of the mobile access router, the mobile access router receiving the information

from the mobile node through the local fixed router informs the mobile node about the global address of the mobile access router.” Thus, claim 1 clarifies that the mobile node sends a message including information requesting a global address of the mobile access router, the message being destined for a network entity outside of the local network, such as, for example, a Binding Update message sent to the mobile node’s home agent. (see, e.g., par. [0062] of the published U.S. application).

Neither Venkitaraman nor Janneteau, whether considered individually or in combination, teach or suggest each of the above-noted features of claim 1.

By way of review, as explained in detail in the previous Amendment filed on October 8, 2010, Venkitaraman discloses a technique in which a mobile router receives, from a mobile node, a router solicitation which is a query from the mobile node asking for information about the mobile router to which it is attached (paragraphs [0048]-[0049]). However, as acknowledged by the Office Action, “Venkitaraman does not expressly teach that a local fixed router attached to the mobile network relays information between the mobile router and the mobile node” (OA, pg. 3). Furthermore, assuming *arguendo* that a local fixed router were to be placed between the mobile node and the mobile router disclosed in Venkitaraman, the local fixed router, which is a legacy router, would receive the router solicitation from the mobile node, but would not forward nor relay information on the router solicitation toward the upstream mobile router. Therefore, in such a scenario, the mobile router could not receive the information on the router solicitation.

Also, by way of review, Janneteau discloses a router which includes functions of receiving a router advertisement from an upstream mobile router, extracting an ordered list of Care-of addresses, and forwarding this list on the link that it serves by multicasting or

broadcasting its advertisement message (col. 9, lines 31-57). More specifically, Janneteau describes the technique as follows, with reference to FIG. 6:

“In accordance with the preferred embodiment and the present invention, MR1 650 constructs its own Care-of Route Advertisement message and includes its own Care-of Address 652 in the advertisement message.

This message is multicasted to all nodes within (below) its own link (MR1 link 155) through its egress interface. All nodes on the link will therefore receive this advertisement message. When receiving such a message, Routers (LFR, LMR, VMR) are expected to extract the ordered list of Care-of addresses 652 and forward this list on to the links that they serve. In this regard, the second MR (MR2) 660 forwards the Care-of addresses 652 to its own link (MR2 link) 230. If this router is a top router of a Mobile Network not within its home network (i.e. a VMR as in the case of MR2 660), it will append its own Care-of address to the list received. M2 660 will then include the MR2 Care-of address 662 in the generation of a new ordered-list. MR2 will then generate its own Care-of Route Advertisement message to be multicasted on its own link (MR2 link) 230, through its egress interface. As a consequence, MR1_CoR is advertised in the first Mobile Network (including MR1 link 155 and LFR1 link 670) whilst the ordered-list {MR1_CoR 652, MR2_CoR 662} is advertised in the second Mobile Network 230.” (emphasis added)

Thus, Janneteau simply discloses that a local fixed router (“LFR”) extracts an ordered list of Care-of addresses 652 and forwards this list on to the links it serves. Thus, this router can relay the ordered list of Care-of addresses from upstream to downstream.

However, Janneteau does not teach or suggest the feature of: “...wherein the dynamic network management system is configured so that, after the mobile node sends a message destined for a network entity outside of the local network, the message including information requesting a global address of the mobile access router, the mobile access router receiving the information from the mobile node through the local fixed router informs the mobile node about the global address of the mobile access router,” as recited by claim 1. Janneteau does not mention anything about a mobile node sending a “message destined for a network entity outside

of the local network,” as recited by claim 1, and further does not mention that “the mobile access router receiving the information from the mobile node through the local fixed router informs the mobile node about the global address of the mobile access router,” as recited by claim 1. In fact, assuming *arguendo* that the local fixed router (LFR) disclosed in Janneteau were to be placed between the mobile node and the mobile router disclosed in Venkitaraman, the local fixed router still could not forward nor relay information on a router solicitation toward the upstream mobile router or to “a network entity outside of the local network,” as recited by claim 1. Janneteau does not provide any teaching or suggestion as to how the LFR could achieve this feature of amended claim 1.

Thus, as described above, even if Venkitaraman is modified to include Janneteau’s local fixed router, information requesting a global address of the mobile router cannot be carried to the outside of the local network formed by the local fixed router.

In contrast, according to the system of claim 1, a mobile node sends “a message destined for a network entity outside of the local network, the message including information requesting a global address of the mobile access router.” This message of claim 1 is clearly distinct from the “router solicitation” disclosed by Venkitaraman, which does not leave the local network. (see Venkitaraman, paragraphs [0048]-[0049]). The “information requesting a global address of the mobile access router” of claim 1 is carried to the outside of the local network formed by the local fixed router since this message including the information is destined for a network entity outside of the local network, and thereby the mobile access router can receive the information.

Accordingly, it is respectfully submitted that Venkitaraman and Janneteau, even if combined as proposed in the Office Action, still would lack the above-noted features of claim 1,

and allowance of claim 1 and all claims dependent therefrom is warranted for at least this reason. Claims 4, 9, 19 and 24 now similarly recite the above-mentioned subject matter distinguishing system claim 1 from the applied references, though do so with respect to a dynamic network management apparatus placed in a mobile access router, a dynamic network management apparatus placed in a mobile node, a dynamic network management method used by a mobile access router, and a dynamic network management method used by a mobile node, respectively. Accordingly, it is respectfully submitted that allowance of claims 1, 4, 9, 19 and 24 and all claims dependent therefrom is warranted for at least these reasons.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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